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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/719,571	09/25/96	ANDERSON D	A-63899-1

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EXAMINER	
GRUN, J	
ART UNIT	**PAPER NUMBER**
1641	22

DATE MAILED: 11/13/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
08/719,571	ANDERSON
Examiner	**Group Art Unit**
James L. Grun, Ph.D.	1641

☒ Responsive to communication(s) filed on *5 Sep 2000*.

☒ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1, 2, 4-8, and 12-16* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1, 2, 4-8, and 12-16* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Technology Center 1600, Group 1640, Art Unit 1641.

The amendment filed 05 September 2000 is acknowledged and has been entered. Claim 16 is newly added. Claims 1, 2, 4-8, and 12-16 remain in the case. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicant's previous indication that the requirement for submission of formal drawings is being held in abeyance pending the indication of allowable subject matter is re-acknowledged.

Claims 1-2, 4-7, and 15 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1-2, "the RET sequence" lacks antecedent basis and it is unclear what is encompassed by "all of part of the...sequence".

In claims 4-7, "the RET sequence" lacks antecedent basis and it is unclear what is encompassed by "all of part of the...sequence".

In claim 15, "the RET sequence" lacks antecedent basis and it is unclear what is encompassed by "all of part of the...sequence".

Applicant's arguments filed 05 September 2000 have been fully considered but they are not deemed to be persuasive. Applicant's assertion that the newly recited limitation that the cells comprise RET protein provides antecedent basis for the newly recited "sequence" is not found persuasive as no sequence is disclosed or previously claimed.

Claims 8, 16, and claims 13-14 as dependent from claim 16 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Stemple et al (Cell 71: 973-985, 1992) for reasons of record in the prior rejection of the similar subject matter of claim 8.

Applicant's arguments filed 05 September 2000 have been fully considered but they are not deemed to be persuasive as there remains no factual evidence of a difference between what is disclosed in the reference and what is instantly claimed. Applicant's arguments drawn to the initially isolated population of the reference were again not found germane or persuasive with regard to the cloned cells of the reference noted in the rejection. The Examiner would note again, with regard to claim 8, the disclosure of the reference that cloned cells were obtained which produced only nonneuronal cells such as glial cells (e.g.: page 977, col. 2; Table 2 (G + O); Fig. 7A (G + O)). Indeed, with regard to the invention as instantly claimed in claim 8, Applicant's arguments admit that the population of cells in the reference was prepared using antibody binding. Applicant's arguments with regard to the different methods of isolation, i.e. "using antibody binding", are also not dispositive of the issues as the process of making a product does not serve to limit or distinguish the same product made by another method from itself. Further, with regard

to claim 16 and claims dependent thereupon, Applicant admits that at least some of the cells cloned with the method of Stemple et al are also "Nps" (see e.g. specification page 26).

Claims 1-2, 4-8, and 12-16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lo et al (Perspectives Dev. Neurobiol. 2: 191-201, 1994), Stemple et al (Dev. Biol. 159: 12-23, 1993), Stemple et al (Cell 71: 973-985, 1992), and Martucciello et al for reasons of record in the prior rejection of the similar subject matter of claims 1, 2, 4-8, and 12-15.

Applicant's arguments filed 05 September 2000 have been fully considered but they are not deemed to be persuasive.

Again, in response to Applicant's arguments that there are no specific suggestions to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Nomiya*, 184 USPQ 607 (CCPA 1975); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather

than by their specific disclosures. *In re Bozek*, 163 USPQ 545 (CCPA 1969). Notwithstanding Applicant's arguments to the contrary, in this case, for the reasons of record, ample motivations to isolate RET+ cells are provided with, for reasons of record, an extremely reasonable expectation of success using the conventional methods of the references. Indeed, Lo et al provide the specific suggestion that cells expressing this marker should be isolated for further testing. Applicant's speculation that processing of the RET protein may be different in developing and mature cells is not found persuasive because such speculation is not supported by any evidence of record.

In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the Applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Notwithstanding Applicant's arguments to the contrary, the teachings of the other references combined with those of Lo et al

in the instant rejection under 35 U.S.C. § 103(a) provide the methodological guidance and reagents for cell isolation and culture and a reasonable expectation of success which Applicant asserts are lacking in the disclosure of Lo et al. Applicant urges that the antibody of Martucciello et al is directed to recombinant RET protein produced in bacteria and would not be expected to bind to RET protein produced in a eukaryotic cell. This is not found persuasive as the reference clearly teaches binding of the antibody to the extracellular domain of the RET protein in normal human tissue samples.

In response to Applicant's arguments that RET expression helps to isolate a particular nonneuronal lineage of neural crest stem cells, the fact that Applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Applicant's assertion that the speculative development chart in Fig. 6 of Lo et al would teach away from the population as claimed in claim 8 is not found persuasive as the reference clearly teaches RET expression in a progenitor of glial cells.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A SHORTENED STATUTORY PERIOD FOR REPLY TO THIS FINAL ACTION IS SET TO EXPIRE **THREE MONTHS** FROM THE MAILING DATE OF THIS ACTION. IN THE EVENT A FIRST REPLY IS FILED WITHIN **TWO MONTHS** OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE **THREE-MONTH** SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR REPLY EXPIRE LATER THAN **SIX MONTHS** FROM THE MAILING DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to James L. Grun, Ph.D., whose telephone number is (703) 308-3980. The Examiner can normally be reached on weekdays from 9 a.m. to 5 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Long Le, SPE, can be contacted at (703) 305-3399. The fax phone numbers for official communications to Group 1640 are (703) 305-3014 or (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

James L. Grun, Ph.D.
November 8, 2000

Christopher L. Chin

CHRISTOPHER L. CHIN
PRIMARY EXAMINER
GROUP ~~1800~~ 1641